

IV. REMARKS

1. Claims 11 and 14 are amended to correct a grammatical error occurring during translation of the application from German into English. The changes do not further limit or narrow the scope of the claims and are not made for reasons related to patentability.

2. The Examiner rejects claim 4 under 35 U.S.C. §112, second paragraph indicating that the term "housing of the design T05" is not described in the specification. The term "T05" refers to commercially available housings for circuitry and circuit elements. One of skill in the art would understand the meaning of the term without further explanation. The housing types are also described in the specification on for example, page 2, lines 26-29; page 9, lines 6-20; page 10, lines 13-22. Thus, claim 4 should be allowable.

Claim 14 is corrected to address the 35 U.S.C. §112, second paragraph rejection.

3. Claims 1, 5, 6, 10 and 17 are not anticipated by Oda (EP Patent 0 845 664) under 35 U.S.C. §102(e).

Claim 1 recites a radiation-sensitive sensor element, a sensor signal processing circuit, a temperature-sensitive reference means and a combination means. This is not disclosed or suggested by Oda. Oda, in Col. 6, lines 33-39, merely recites a "thermal infrared detecting element 401" and a "reference level detecting element 403." In Applicant's invention, the temperature-sensitive reference means provide a temperature-dependent second electric signal. No such disclosure is made in Oda. Actually, Oda does not describe or suggest what function the reference level detecting element has. Particularly, it is

unknown from Oda whether the reference level detecting element detects a temperature reference (ambient temperature of the sensor element itself) or whether it detects the ambient IR-radiation coming from the space around a particular target. In Applicant's invention, the temperature-sensitive reference means provides a temperature dependent second electrical signal. No such disclosure is made by Oda. And further, an integrated circuit is mentioned. But it is not said which function said integrated circuit has. It may be an analogue-digital-converter and/or a parallel-serial-converter (multiplexer). But it needs not necessarily a correction circuit.

Both the thermal infrared detecting element 401 and the reference level detecting element 403 comprise thermopiles 421a and 421d cf. column 6, lines 44 and 53. Basically, the operation of the Fig. 4 embodiment of Oda is hard to understand for a skilled person for the following reason: A thermopile gives a signal when parts of the pile are heated and others are cooled. For usual thermopile detectors this is accomplished by putting some parts of the thermopile under a reflection film (keeping the thermopile parts below it cool) and putting other parts of the thermopile below an absorption layer (serving to absorb IR-radiation and thus warming these parts up), and insulating the entire structure against the surrounding by putting it all, or at least the warm contacts, on a thin membrane so that no thermal mass is below the warm contacts. However, the Oda citation describes quite the opposite: column 7, lines 1-5, say that thermal diffusion is desired, this meaning that actually there is not distinction between cold and warm portions/contacts so that also it is not recognizable how such a sensor should produce a valuable signal, keeping in mind that then both cold and warm portions of a sensor

pile have ambient temperature and thus not producing an output signal at all.

It is noted that Fig. 4 of Oda is prior art to the actual teaching of the Oda-application. However, basically the application itself says nothing different. Claim 1 mentions two pixels, this already implying that from a functional point of view the two sensing elements are the same, namely radiation detectors. Particularly, again the cold and the warm contacts of the second pixel are both subject to ambient temperature so that it is not recognizable how the device should function for detecting the operating temperature.

Oda also does not disclose or suggest a combination means for combining the two electric signals as claimed by Applicant. Col. 6, line 38 merely describes a common silicon substrate 411. Not a combination means.

Since Oda does not disclose each element of Applicant's invention as claimed, the claims cannot be anticipated under 35 U.S.C. §102(e).

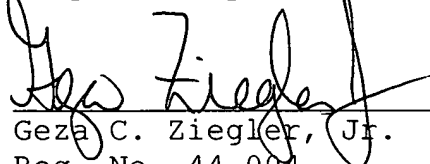
4. Claims 2, 3, 7, 8, 12-16 and 18 are not unpatentable over Oda under 35 U.S.C. §103(a). As noted previously, Oda at least does not disclose or suggest the temperature-sensitive reference means as described and claimed by Applicant. The dependent claims should be allowable at least by reason of their respective dependencies.

5. Claim 9 is not unpatentable over Oda in view of Rosenthal under 35 U.S.C. §103(a). Claim 9 should be allowable at least by reason of its dependency on claim 1.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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16 MARCH 2004
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